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## THE SCIENTIFIC AMERICAN:

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See advertisement on last page.

## Poetry.

### EARNESTNESS.

Seasons ever ceaseless changing—  
Flowers in boundless beauty growing—  
Clouds over heaven's vault ever ranging—  
Rivers ceaseless flowing—  
Martyrs, Heroes, Saints, and Sages,—  
Beacons to remotest time—  
Towering over the wrecks of ages,  
From their altitudes sublime,  
Ever cry, dying man work earnestly!

Earnestness! life ever preacheth  
To the God-breathed deathless soul,  
That the path by which she reacheth  
To her destined goal.  
Life around is ever dying—  
Only death to live doth seem;  
Time is onward ever flying,  
Silent, swift as lightning's gleam,  
Ceaselessly, deathless souls work earnestly!

Say not thou art weak and lowly—  
That thy power in good is small—  
Spreads the eternal truth how slowly,  
Each is born for all!  
Humble help by Heaven's ne'er slighted;  
What's a trembling rain-drop's power?  
By such pearly hosts united—  
Blossom, forest, field, and bower—  
Weakness never frees from being earnest ever!

Misery round thee, piteous wailing,  
Pleadeth ever for redress;  
'Tis thy brother; nothing failing,  
Strive to make it less!  
Immortal beings are enshrouded  
In the depths of mindless gloom:  
Shall their souls be ne'er unclouded  
Till their bodies fill the tomb?  
Hear their cry, for us, O man, work earnestly!

Ever faithful, rest not, rust not,  
Priceless time and soul's away,  
To-morrow's harlot-wiles oh, trust not;  
Work while 'tis to-day;  
Rouse to deeds of Love and Duty,  
Ere life verges in death's gloom—  
Deeds that budding here in beauty,  
Through eternity shall bloom?  
Heaven's full joy shall crown thy toils triumphantly!

### TELEGRAPH.

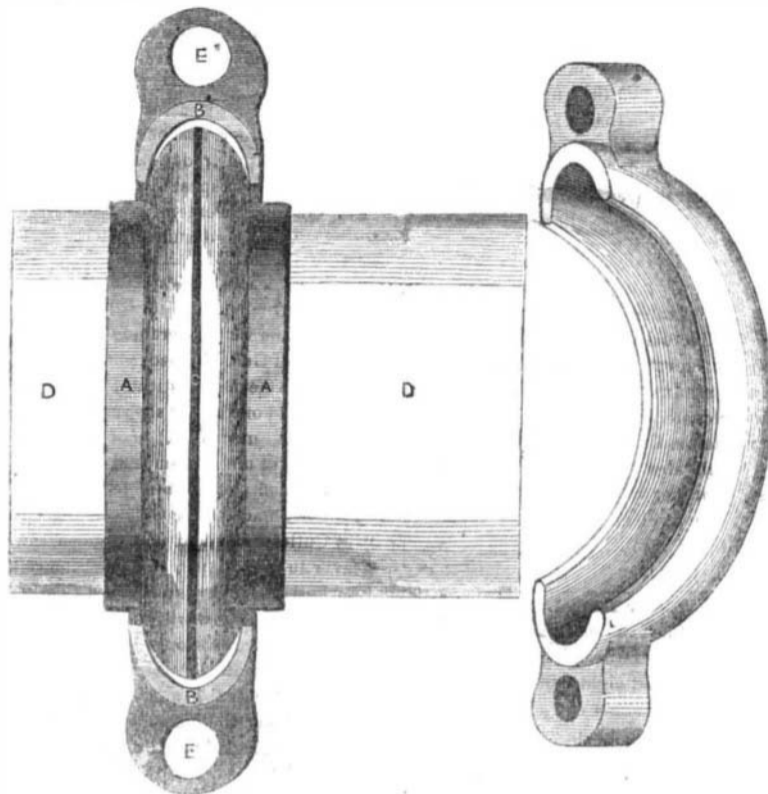
Ah! these little 'clicks' of the telegraph—  
Though they breathe not a word  
Their voices are heard  
At a distance no voice could reach:  
And swiftly as thought,  
The words are brought,  
And the lightning endowed with speech!

Though seas roll between,  
And lands intervene,  
The absent are at hand,  
The eye seems to hear,  
And space disappear,  
And time is compelled to stand

### The Cunard Steamers.

The average passages from Liverpool of this line of steamers during the past year, was 15 days 5 hours. The shortest passage being made by the Britannia, (12 days,) and the longest by the Hibernia, (20½ days.)

## WEST AND THOMPSON'S CLASP COUPLING JOINT.



In our last week's number we noticed at considerable length this new invention, and promised that in a short time we should present our readers with an engraving of it. We now fulfil that promise, and without a single word of explanation almost any mechanic will be able by the above cut to understand its nature and the mode of its construction.

EXPLANATION.—D D, are two pieces of pipe A A, are two flanges joined each to one of the pieces of pipe. It will be observed that the coupling parts of these flanges are beveled and have no bolt holes as those in common use all have. C, is a piece of vulcanized India rubber, or any other packing that may be thought necessary, although a pressure can be exerted in bringing the flanges so close together that the joint is made perfectly tight without any packing, but we think that it is all the better to use a little packing B B, is the clasp. This is divided

into two parts and this part is represented with the flange resting on it. The other part of this clasp is represented by the figure to the right, which shews its concave part. By placing this over the bevel of the flanges and securing the two parts of the clasp together by belts passing through E E, is all the operation that is required in connecting two separate pieces of pipe together. Every mechanic will perceive that the tighter the clasp is screwed up the faces of the flanges are brought closer together and the joint is thereby made exceedingly tight. Experience has proven this joint to be excellent for pipes that are used for conducting steam. In our last number we published the names of gentlemen who have spoken very highly of it, and we also mentioned where it might be seen in practical use. Other information may be had by communications addressed to West and Thompson, of this city.

### Corals.

Corals, on being gathered perfectly fresh, and planted in sea water, appear to put forth small flowers from all the minuta cavities, or hollow points on the surface. These supposed flowers, for such an idea has been entertained, are real animals, and consequently corals are to be considered as aggregates of animals, either forming, or at least inhabiting the calcareous substance of the coral in which they appear. The smaller corals, commonly known by the name of corallines, or sea mosses, are so many ramified sea polypes, covered with a kind of strong horny case to defend them from the injuries to which they would be liable, in the boisterous element destined for their abode. The harder, or stony corals are equally of an animal nature; the entire coral continuing to grow as an animal, and to form, by secretion, the stronger, or horny exterior, which may at once be considered as its bone, and the habitation in which it has constantly to dwell. A coral of this kind is, therefore, a large compound zoophite, springing up from the rock, in which it seems to have taken root, and shooting out into branches like a vegetable production.

The Duke of Wellington's original name was Wesley. He was of the same family as John Wesley. His present name is Wellesly.

### Habits.

Habit is a strange thing. It is the adoption of and continuation of certain kinds of actions until they become easy and natural to us. But the power of habits more strange. Look at it. It often counteracts the most sincere determination. It constrains many to break the most sincere vow. With herculean energy, it contends with resolutions of the mightiest minds and never will it relinquish its tenacious grip, while there is the least hope of victory. It sways our lives moulds our characters, establishes our reputations, controls our feeling, and determines our destinies. See then, what depends upon the habits you contract. How prudent should we be in choosing at first a course of action. Do you hear, young man, your future destiny depends upon the habits you prefer now

### True Economy.

Economy is a good thing, and should be practiced by all, but it shows itself in denying ourselves, not by oppressing others. We see persons spending dollar after dollar foolishly, one hour, and the next trying to save a five-penny piece of a wood-sawyer, coal-heaver, or market woman. Such thinks are disgraceful if not dishonest.

There are 800 Generals in the Spanish army and scarcely a good one in the whole lot.

## RAIL ROAD NEWS.

The Great Western Railroad, as it is called, is on the Canadian side of this Continent, and stretches across the peninsula made on the other side by the bend of Lake Erie. It will unite Detroit by land with New York by a journey of as many hours as it once took days to steam up or down the lakes. It is 228 miles in length and the cost of its construction will be about \$4,500,000, of which sum \$2,500,000 have been already subscribed in Canada and England. Mr. Stuart, our State Engineer, is the Engineer of this great Canadian enterprise, and Mr. Ellet of Pennsylvania, we believe, is the contracting Engineer to build the Niagara Suspension Bridge, to unite this Canadian road with the Empire State. Thus two Americans superintend these great works and one of them, the grandest ever projected in this country, the completion of which will reflect great honor upon Mr. Ellet. The Canadians have exhibited much generosity and good feeling towards our citizens connected with them in these works and have expressed a hope along with a number of English noblemen, that it would be the basis not only of an everlasting peace between the two countries, but also of a permanent reciprocal friendship.

### Railroad Dividends.

The Boston Path-Finder says that more than a million of dollars would be paid out by the several Railroad corporations in that city, in the shape of dividends, interest upon loans, &c., declared on the 1st of this month

### Michigan Central Railroad.

The Michigan and Central Railroad company have declared a dividend of eight per cent on the capital to 10 per cent on the actual cost. The net earnings of the road to Dec. 1st, was \$295,000.

### Boston and Worcester Railroad Transportation.

From a statement in the Boston Daily Advertiser, it appears that the quantity of merchandise transported over the Boston and Worcester Rail Road during the year on the 30th of November last, amounted to 284,000 tons, which exceeds an average of 900 tons a day. The freight money paid for the transportation of this merchandise, to the three rail roads which from the two lines terminating in Boston, was \$867,000. One half the amount was transported a distance of 200 miles, and the average cost of the whole transportation was about \$2, 40 a ton.

### Pay of Rail Road.

English experience in railroad travelling, has clearly demonstrated that it is from short travel that the income of the roads is derived. Eighty per cent of the passengers do not travel more than twelve miles. This is one of the many facts which go to prove that, in selecting routes for railways, it is not so much the terminal points that should be looked to, as the places along the line. Short travel is the source of profit from railroad investments, in every country in which railroads have been made.

The St. Louis New Era states that the posts for the magnetic wires where they cross the Mississippi, are 144 feet high: one of them is fixed on the Illinois shore one of them is fixed on Bloody Island, and the other in the city.

The Vermont and Massachusetts Railroad has been opened to Athol, 33 miles from Fitchburg

The newspapers of St. Louis are talking of extending the line of Telegraph, from that city to the Pacific. The cost is estimated at only \$300,000.